

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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INVESTIGATION NO. 3107  
THE NEW YORK CENTRAL RAILROAD COMPANY  
REPORT IN RE ACCIDENT  
AT HURON, OHIO, ON  
JUNE 5, 1947

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SUMMARY

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Railroad: New York Central  
Date: June 5, 1947  
Location: Huron, Ohio  
Kind of accident: Derailment  
Equipment involved: Track motor-car : Passenger train  
Train number: : 251  
Engine number: : 5304  
Consists: Motor-car 3022-W : 13 cars  
Speeds: Standing : 76 m. p. h.  
Operation: Signal indications and automatic  
train-stop system  
Track: Double; 1°08' curve; level  
Weather: Clear  
Time: 2:16 p. m.  
Casualties: 1 killed; 11 injured  
Cause: Failure to provide adequate protection for movement of track motor-car  
Recommendation: That the New York Central Railroad Company provide adequate block-signal or train-order protection for the movement of track motor-cars on its line

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 3107

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS  
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE NEW YORK CENTRAL RAILROAD COMPANY

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July 18, 1947

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Accident at Huron, Ohio, on June 5, 1947, caused by  
failure to provide adequate protection for the  
movement of a track motor-car.

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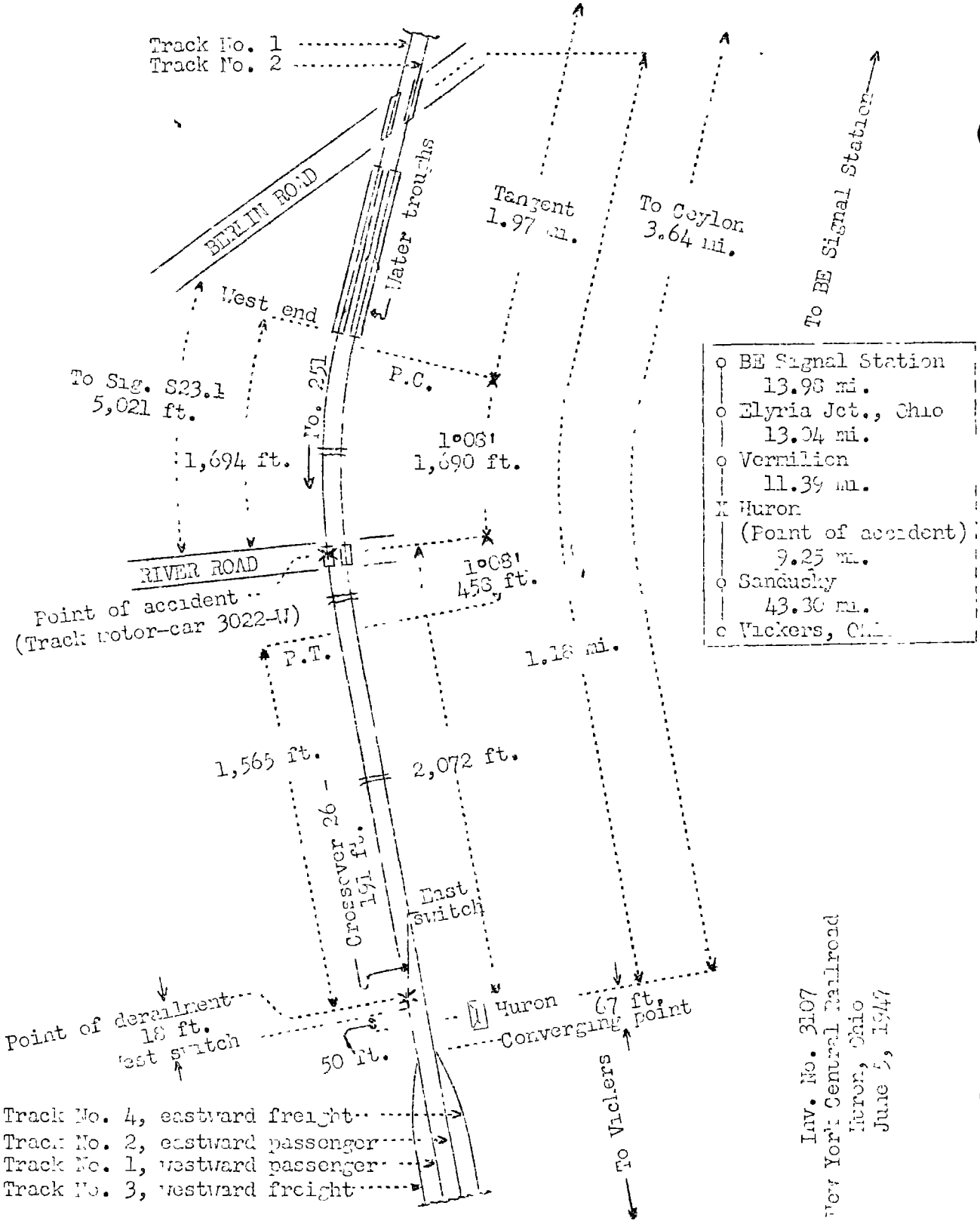
REPORT OF THE COMMISSION<sup>1</sup>

PATTERSON, Commissioner:

On June 5, 1947, there was a derailment of a passenger train after it had collided with a track motor-car on the New York Central Railroad at Huron, Ohio. The derailment resulted in the death of one train-service employee, and the injury of five railway-mail clerks, two express-messengers, one Pullman employee, two dining-car employees and one train-service employee. This accident was investigated in conjunction with a representative of the Public Utilities Commission of Ohio.

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<sup>1</sup>Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 3107  
New York Central Railroad  
Huron, Ohio  
June 5, 1947

Location of Accident and Method of Operation

This accident occurred on that part of the Toledo Division extending between BE Signal Station, near Cleveland, and Vickers, Ohio, 91.46 miles, a double-track line in the vicinity of the point of accident, over which trains moving with the current of traffic are operated by signal indications and an automatic train-stop system. The main tracks from the south to north are designated as No. 2, eastward; and No. 1, westward. Within interlocking limits at Huron, 38.41 miles west of BE Signal Station, the double-track line converges with a four-track line at a point 67 feet west of the station. From this point westward the main tracks from south to north are designated as No. 4, eastward freight; No. 2, eastward passenger; No. 1, westward passenger; and No. 3, westward freight. The west switch of trailing-point crossover 26, which is 191 feet in length and connects tracks Nos. 1 and 2, is 50 feet east of the station. The collision occurred on track No. 1 at a point 2,072 feet east of the station, where the railroad is crossed at grade by River Road, and the derailment occurred 2,004 feet westward and 13 feet east of the west switch of crossover 26. From the east there are in succession, a tangent 1.97 miles in length, a  $1^{\circ}08'$  curve to the left 1,690 feet to the point of collision and 458 feet westward, then there is a tangent 1,547 feet to the point of derailment and a considerable distance westward. The grade is practically level.

River Road intersects the railroad at an angle of 90 degrees, and is surfaced with asphaltum to a width of 32 feet. The surface of the crossing between the rails of track No 1 and immediately outside each rail consists of 32-foot planking, 4 inches thick by 10 inches wide by 16 feet long. Flangeways 3 inches wide are provided.

Automatic signal S23.1, governing west-bound movements on track No. 1, is 5,021 feet east of River Road. This signal is of the color-light type, and is approach lighted.

The west ends of water troughs for supplying water to the tenders of engines in motion on both main tracks are 1,694 feet east of River Road.

Operating rules read in part as follows:

11. A train finding a fusee burning on or near its track must stop and extinguish the fusee, and then proceed prepared to stop short of train ahead or obstruction.

14. Engine Whistle Signals.

Note.--The signals proscribed are illustrated by "o" for short sounds; "—" for longer sounds. \* \* \*

Sound.	Indication.
* * *	
(1) — — o —	(1) Approaching public crossings at grade.
	* * *
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Rules governing operation of track motor-cars read in part as follows:

1902. The operation of track motor \* \* \* cars must be in charge of qualified employes. \* \* \*

1904. Operators of all cars must carry a copy of the current time-table and necessary signal equipment.

1906. Cars operated where track circuits are in use must have insulated wheels.

1916. \* \* \* Cars that cannot be quickly removed from track must be protected.

1917. Cars must not be left on track unprotected. \* \* \*

1918. Employees in charge of operation of cars must obtain, so far as possible, and in writing when practicable, information concerning train and engine movements. Such information will not relieve persons in charge from insuring full protection. When conditions require, protection from train dispatcher must be obtained.

1919. Cars must be operated with the expectation of finding main track in use. A lookout for approaching trains must be maintained in both directions.

The maximum authorized speed was 80 miles per hour for the passenger train and 20 miles per hour for the track motor-car.

### Description of Accident

About 1:55 p. m. track motor-car 3022-W departed west-bound from Ceylon, 3.34 miles east of Huron, and was set off at Berlin Road, 1.18 miles east of Huron. It was replaced on track No. 1 about 2:12 p. m. and it proceeded westward to River Road, where it was stopped on the crossing about 2:15 p. m. About 1 minute later the motor-car was struck by No. 251.

No. 251, a west-bound first-class passenger train, consisted of engine 5304, a 4-6-1 type, two baggage cars, one milk car, one baggage car, one mail car, one baggage-express car, one passenger-baggage car, two coaches, one sleeping car, one dining car and two coaches, in the order named. The second and third cars were of steel-underframe construction, and the remainder of the cars were of all-steel construction. This train passed Elyria Jet., the last place where its schedule time is shown in the timetable, 24.43 miles east of Huron, at 1:48 p. m., 30 minutes late, passed Vermilion, the last open office, 11.39 miles east of Huron, at 2:08 p. m., and while moving on track No. 1 at a speed of 73 miles per hour it struck track motor-car 3022-W.

The motor-car was demolished. The wreckage became wedged against the pilot of the engine of No. 251 and was moved westward a distance of 2,004 feet to the heels of the switch rails of the west switch of crossover 26. At this point the wreckage caught in the heels of the switch rails, and the flanges of the left engine-truck wheels climbed the south stock-rail of track No. 1 and crossed the rail diagonally within a distance of 22 feet, then the left engine-truck wheels dropped to the ties outside the south rail and the right engine-truck wheels dropped inside the north rail. The engine-truck wheels moved in the same relative positions throughout a distance of 131 feet westward to the point where the general derailment of the engine and the first to eleventh cars, inclusive, occurred. Separations occurred at each end of the first to sixth cars, inclusive. The engine and the tender stopped on their left sides, between tracks Nos. 1 and 3 and parallel to them, with the front end of the engine 634 feet west of the point of derailment. The left sides of the engine and the cab were badly damaged. The first car stopped on its side, across the rear of the tender and tracks Nos. 4, 2, 1 and 3, and at right angles to them. The second car stopped on its side and at an angle of 45 degrees to the tracks, with its rear end on track No. 3 against the rear of the tender and its front end 45 feet north of the centerline of track No. 1. The third car stopped on its side and parallel to the second car, with its front and rear ends, respectively, 70 and 25 feet north of track No. 1. The fourth and fifth cars stopped parallel to each other, across tracks Nos. 4, 2, 1 and 3 and at right angles to them, at points, respectively, 20 and 40 feet east of the

first car. The sixth car stopped upright and at an angle of 45 degrees to the tracks, with one end 15 feet north of the center-line of track No. 1 and against the third car and the other end on track No. 1. The seventh to eleventh cars, inclusive, remained upright on the roadbed of track No. 1 and in line with it. The first, second and fourth cars were destroyed. The fifth and sixth cars were badly damaged, and the other derailed cars were considerably damaged.

The engineer of No. 251 was killed, and the fireman was injured.

The weather was clear at the time of the accident, which occurred about 2:16 p. m.

According to data furnished by the railroad, motor-car 3022-V was of the 4-wheel type. It weighed 610 pounds, and was 7 feet 1 inch in length. It was equipped with a canopy top, which was 5 feet 7 inches above the level of the tops of the rails, and an enclosed front end provided with safety-glass windows. Movable 98-pound extension-type lift handles were provided for use in removing the motor-car from the track.

Engine 5304 was equipped with a cast-steel deflecting pilot of the unit-type, designed with a central pocket for the reception of a vertical-drop retractable coupler. The pilot was generally of triangular-shape at the base, provided with vertical slots in the faces, and was secured to the pilot beam by bolts. Flat non-skid surfaces parallel to the plane of the rails were provided on each side of the coupler pocket at the lower edge of the pilot beam. Plates having non-skid surfaces extended along the base line of the pilot from the outer corners to the nose and projected outward about 4 inches. Pilot sill-steps were attached to the front surface of the pilot near the base line outside the line of each rail, and they projected forward not less than 8 inches. At the time of the accident, the coupler was retracted in dropped position and was secured in the coupler pocket.

#### Discussion

The investigation disclosed that immediately prior to the accident an assistant supervisor of bridges-and-buildings and a bridge carpenter were making an inspection of the condition of the surfaces of numerous highway-grade crossings between Elyria Jct. and Huron, and they were using track motor-car 3022-V to transport them from crossing to crossing. About 1:50 p. m. the assistant supervisor communicated from Ceylon, 3.64 miles east of Huron, by telephone with the train dispatcher and obtained a line-up of train movements. The dispatcher informed the assistant supervisor that No. 135, a west-bound express train, had departed from Elyria Jct. and that No. 251, a west-bound passenger train, would follow No. 135. The dispatcher said that



he did not remember what other information he gave to the assistant supervisor at that time, but two operators, who were listening to the conversation, said that the dispatcher instructed the assistant supervisor to keep the motor-car clear of track No. 1. Motor-car 3022-W departed from Ceylon about 1:55 p. m. and proceeded westward 3.26 miles to Berlin Road, where the motor-car was removed to clear for No. 135. Immediately after No. 135 passed Berlin Road the motor-car, moving on track No. 1, departed westward about 2:12 p. m., without the assistant supervisor having obtained further information or instruction regarding overdue trains moving on track No. 1, although a telephone is located at that crossing. Motor-car 3022-W arrived at River Road, 0.83 mile west of Berlin Road, about 2:15 p. m. and stopped on track No. 1 so that the assistant supervisor could inspect the condition of the crossing. About 1 minute later the motor-car was struck by No. 251. The assistant supervisor and the bridge carpenter said that when they saw No. 251 approaching about 2,000 feet distant they attempted to remove the motor-car from track No. 1, but the car was struck before all the wheels were removed from the rails.

As No. 251 was approaching River Road the speed was 78 miles per hour, as indicated by the tape of the speed-recorder with which the engine was equipped. The maximum authorized speed for this train in the territory involved is 80 miles per hour. The engineer was seated in his usual position on the right side of the cab. The fireman was stationed on the apron in the left gangway and facing the engineer, and was operating the water-scoop dipper to supply water to the tender from the track trough. When the engine was about 2,000 feet east of River Road, the fireman operated the lever to raise the dipper, waited an interval of several seconds until the air pressure had exhausted from the water-scoop cylinder, then closed the cut-out cock in the air line and returned to his seat on the left side of the cab. At that time No. 251 was traversing a 1°08' curve to the left and the engineer was sounding the whistle signal for River Road grade crossing. The fireman said that when the engine was about 1,000 feet east of River Road he saw a track motor-car, but was not certain which track it was occupying. Soon afterward he observed that the motor-car was occupying track No. 1 and called a warning to the engineer, who placed the brake valve in service position. As the engine entered the crossing, the motor-car disappeared from the fireman's view and, since the engineer made no further brake-pipe reduction, the fireman thought the motor-car had been removed from the track. He was not aware of anything being wrong until the derailment occurred. The engineer was killed.

The brakes of this train had been tested and had functioned properly en route. Examination after the accident disclosed that the throttle lever was in closed position, the independent brake valve in running position and the automatic brake valve

in release position. Examination of the speed-recorder tape indicated that the speed of No. 251 was 76 miles per hour at the time the derailment occurred. Apparently, the engineer did not see the motor-car and was not aware that it had been struck by the engine. The pilot of the engine was provided with a coupler pocket to receive the vertical-drop type retractable coupler, and the coupler was secured in retracted position at the time of the accident. Because of the various projections which were parts of the pilot assembly, the wreckage became wedged against the pilot and was held in that position until it was caught in the west switch of crossover 26.

The movement of track motor-cars is authorized orally by the train dispatcher either directly to the operator of the motor-car or through operator-signalmen at open stations, and an oral line-up of the movement of trains within a limited territory is given operators of track motor-cars. Train crews are not given information concerning line-ups issued to motor-car operators, and, since track motor-cars are insulated to prevent actuation of the automatic-block signals and the automatic train-stop system, the members of train crews receive no information concerning the movement of motor-cars. The rules governing the operation of track motor-cars provide that motor-cars must be protected by their crews at all times. Such protection consists of visual observation in both directions by the occupants of the motor-car, and flag protection. At the time of the accident, the motor-car was equipped with the required flagging signals. The assistant supervisor said that flag protection was not provided, because he was desirous of avoiding delay to trains and he thought the motor-car could be removed from the track when an approaching train was observed and in time to avert a collision. The rules require that line-ups should be in writing, when practicable. The investigation disclosed that in most instances motor-cars are operated in the territory involved after the operators obtain line-ups orally. In the instant case, the assistant supervisor said that he did not hear the dispatcher instruct him to keep the motor-car clear of track No. 1, and he thought there was sufficient time remaining for the motor-car to proceed ahead of No. 251 from Berlin Road to River Road. He could assign no reason why the motor-car was not removed immediately upon arrival at River Road. The assistant supervisor was experienced in the operation of motor-cars on main tracks and understood that motor-cars must be protected at all times while occupying a main track. The train dispatcher said that the line-up given the assistant supervisor was for information only, and that it did not confer authority for the motor-car to occupy track No. 1.

In addition to the present accident, during the past four years the Commission has investigated fifteen collisions between trains and motor-cars. These accidents resulted in the death

of 33 persons and the injury of 36, and were caused by failure to provide adequate protection for the movement of track motor-cars. In the instant case, the crew of the train involved had no information that the motor-car was being operated. The book of operating rules of this carrier contains manual-block rules for the blocking of trains, but these rules are not used to provide protection for motor-cars. If proper block protection had been required and provided, the members of the crew of the following train would have received definite information that the motor-car was occupying the block involved. If adequate train-order protection had been provided for the movement of the motor-car this accident might have been prevented.

Cause

It is found that this accident was caused by failure to provide adequate protection for the movement of a track motor-car.

Recommendation

It is recommended that the New York Central Railroad Company provide adequate block-signal or train-order protection for the movement of track motor-cars on its line.

Dated at Washington, D. C., this eighteenth day of July, 1947.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.